

A UROP perspective by Amy Dean

Summer 2023 (undertaken in the Department of Earth Science and Engineering)

Amy was a year 2 undergraduate at Imperial College London in 2022-2023: MSci Earth and Planetary Science, Department of Earth Science and Engineering.

UROP title: Exploring the Stimson formation at Siccar Point using Pro3D and paleocurrent analysis.

I find the research going on within my department incredibly fascinating and I wanted to be part of that amazing environment. I was especially inspired by a lecture we had in the Data Visualisation Centre looking at sedimentary structures on Mars; they were at a near-real-life-scale on screens spanning 270°. This was such an exciting experience and greatly intensified my interest in planetary surface processes.

When I was planning my summer, I didn't have the flexibility to do a standard internship, due to fieldwork commitments for my dissertation project, so doing a UROP meant I could still get research experience over summer and not be restricted to pre-organised timings. I took a chance emailing a few members of the MSL team in my department, expressing my interest and why I believed it would be a great opportunity, and the potential supervisor was enthusiastic. The application for funding really helped to consolidate what my project's aims and objectives were – academically and personally – so I'm really glad I was able to apply for and receive funding!

Having received funding, it allowed my stay in London to be less pressurised. I didn't have to pick up an additional job alongside my UROP, allowing for my full concentration and efforts to be put towards my project, enabling the full experience of what academia would be like.

My main reason for doing a UROP was to discover whether I enjoyed academia and to see if I want to consider it as a future career, but this project was especially fulfilling as I love researching planetary surface processes as well. While I wanted to have a productive summer, I also wanted it to be a good mix of something I love and something that might help build my career and education. This seemed like the perfect fit and has been!

My supervisors (the main supervisor, and those who were involved day-to-day) have previously been my lecturers and therefore I knew they would be very welcoming, and so I wasn't worried about starting. I had also done some reading in advance and looked into how to use some of the specialist software, so this allowed me to feel more confident about what I was going into. The preparation was appreciated but not necessary as I had a very useful first session, giving me an overview of the work, context from past research as well as who to contact for any help.

The 8 weeks were packed with useful tips and learning curves. The academic skills I gained included: becoming proficient in software useful in several sectors; learning new data analysis techniques; became very well read on the Stimson formation; and advancing my presentation skills and writing in an academic tone and format. Personally, I have become more confident in my academic ability and learnt a lot about work-life balance. It has also been really great to be around academics, outside of lectures, to hear about their experiences and they have given me lots of amazing advice. I've met a lot of new people, gaining contacts that I really hope to use in the future, and been able to listen to all the great work their doing too – an entirely inspiring experience.

I have had lots of tips regarding graduate jobs and PhDs, while also discussing the MSci project which I would love to pursue in an area related to my UROP. It has definitely confirmed that academia is definitely something I would consider after I graduate, especially if I could properly join the team I was with for my UROP. As well as this, I've been advised to present at the BPSC 2024 conference with my UROP work which would be such an unexpected result from my UROP.